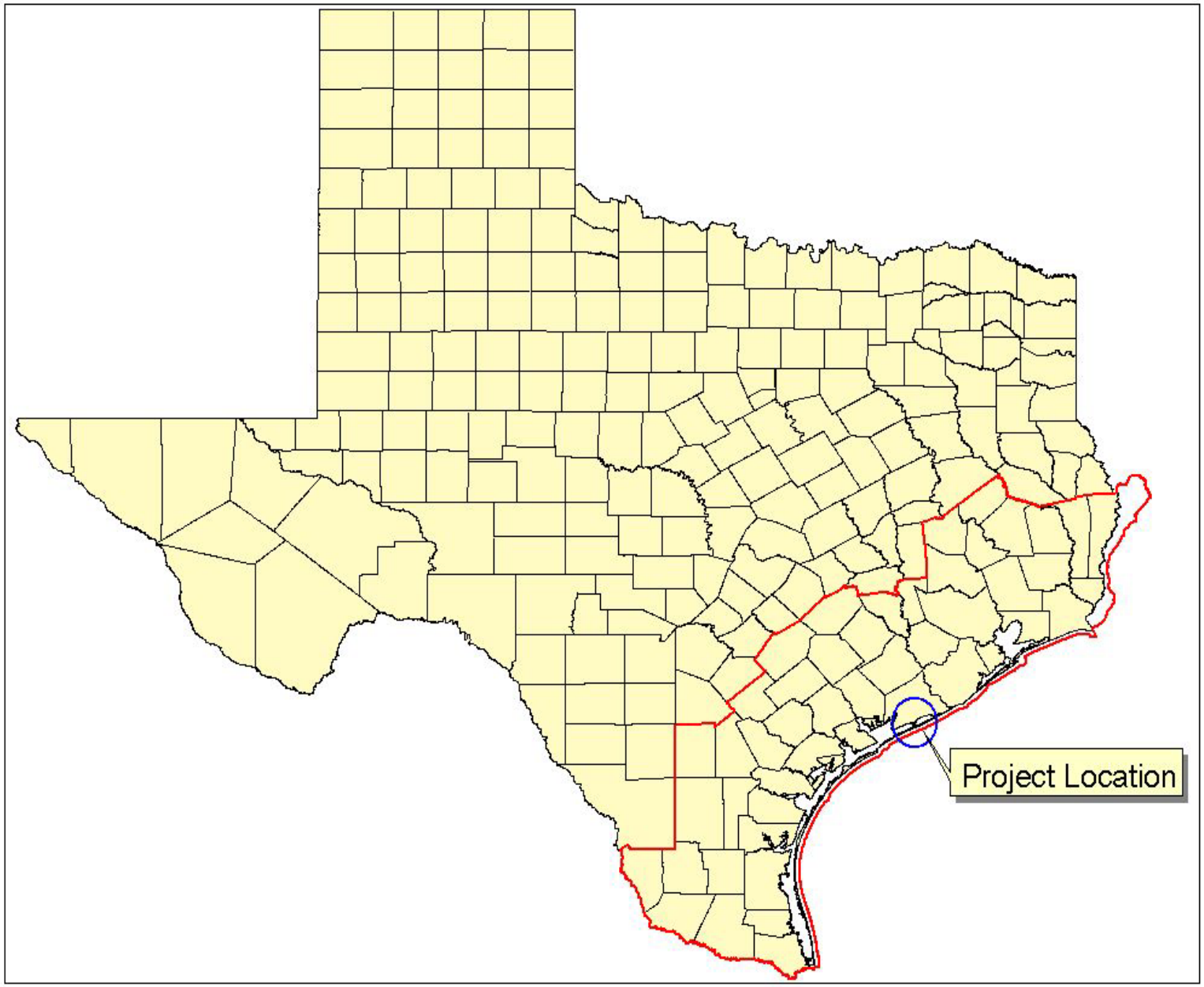
GIWW MODIFICATIONS, TEXAS

Colorado River Locks
Feasibility Study


Project Location

Colorado River Locks looking East

East Lock looking East

Existing Facilities

- Two Lock Chambers
- Length of lock chamber 1,200 Feet
- Horizontal clearance 75 Feet
- Sill elevation -15 feet MLT

East Lock

East Lock looking West

View from West Lock


08-17-00 FRI
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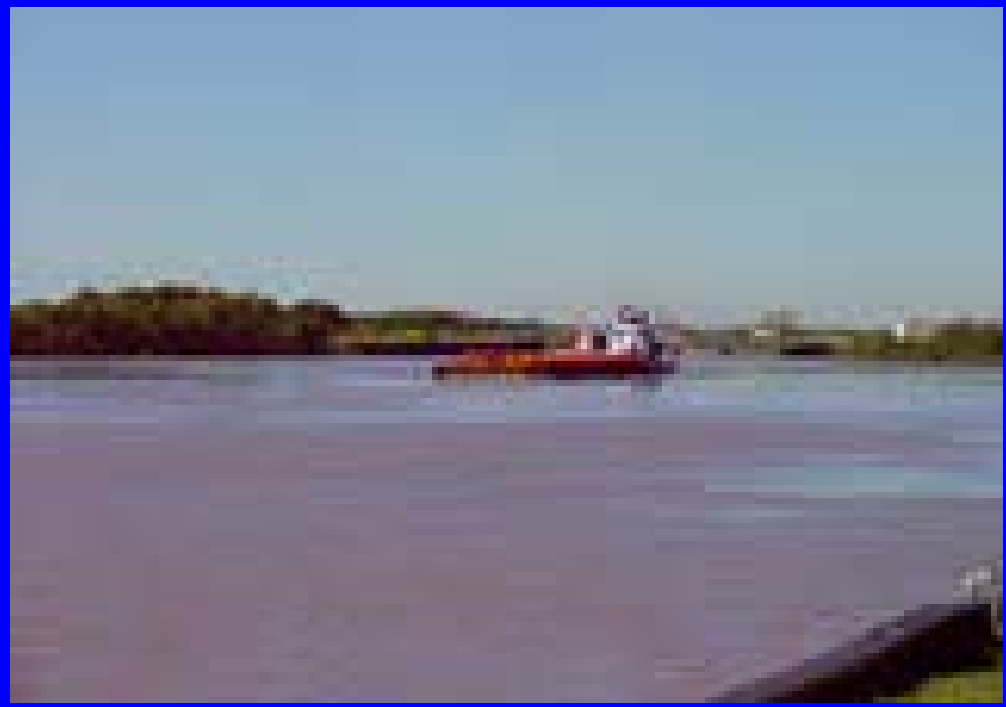
PLAY

View from East Lock




Warning
Small Craft Shall
Not Enter Locks
While Barges Are
Passing Through
No Wake
Zone

Reconnaissance Phase

- Initiated February 2000
  Colorado River Locks/
  Brazos River Floodgates

- Completed September 2001

Feasibility Studies

-Colorado River Locks study initiated October 2001

- Brazos River Floodgates deferred

Study Purpose

To determine the need and advisability of modifying the configuration of the crossing at the GIWW and the Colorado River to reduce barge traffic accidents and delays

Alternatives Identified

- Relocate the locks
- Widen the locks
- Remove the inboard gates
- Replace locks with wider floodgates
- Remove the locks
- install gate in the bypass channel
- Relocate intersection bypass channel

Identified Non-Structural Measures

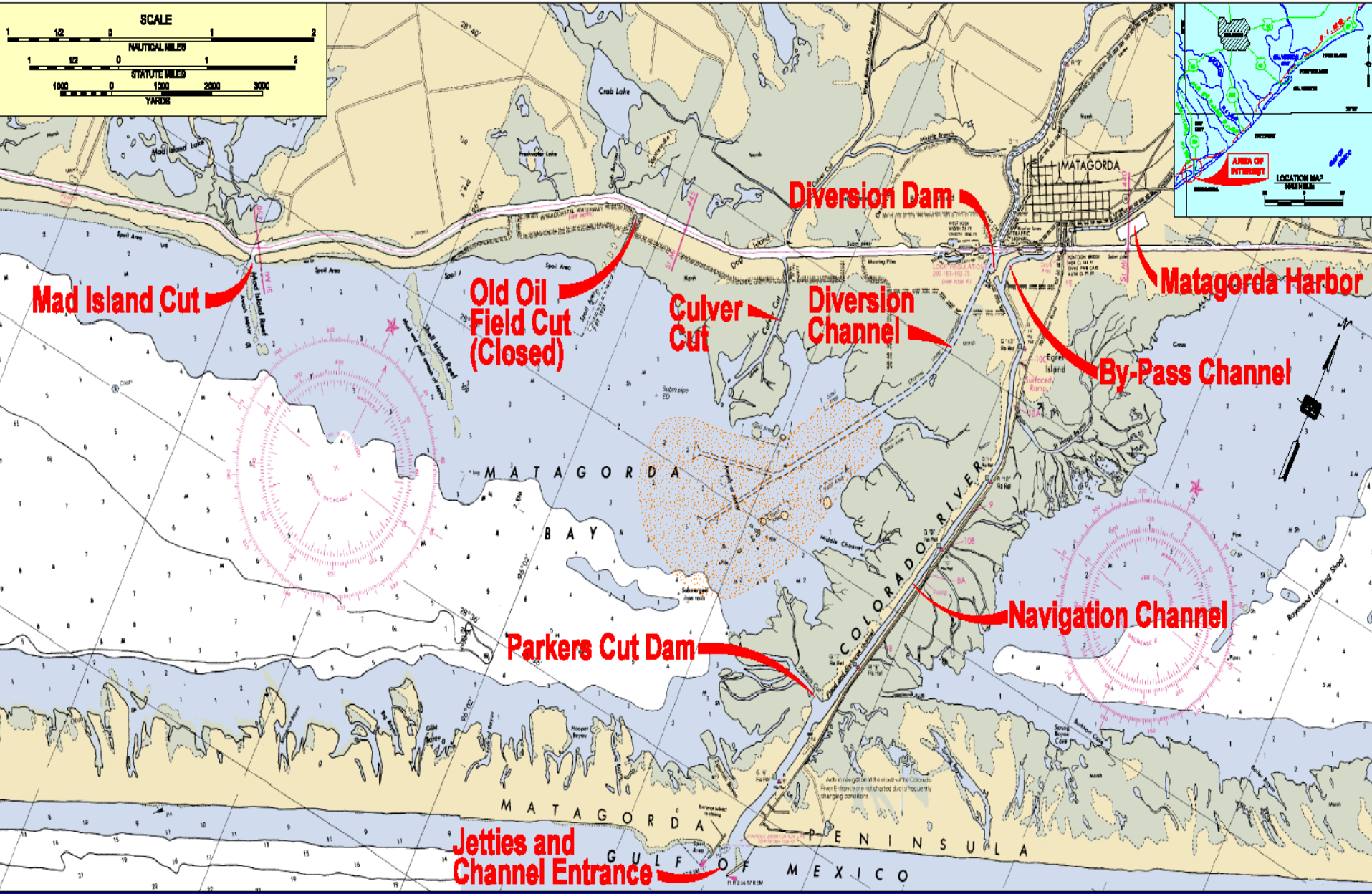
- Employ helper boats, bow thrusters, or tugs to assist barges across the river

Possible effects of Mouth of Colorado River Project

- Currents in GIWW at Bypass Channel due to strong tidal currents
- Reduced water levels and poor water quality in the Old River Channel
- Erosion of the southwest point
- Increased difficulty navigating across the Colorado River due to eddies in currents near eroded southwest point
- Local access and safety
- Dredging frequency at jetties

U.S. Army Corps of Engineers
Galveston District

MOUTH OF COLORADO RIVER, TEXAS



Colorado Locks –Diversion Channel – Bypass Channel

Jetties and Parker's Cut

Previous Studies

Bypass Channel/Diversion

- Modeling and Simulation Study 1990

Colorado River Locks/Bypass Channel

- Physical Model Study 1997-2000
- Southwest point Stabilization WES Letter Report 1999-2000

Previous Studies (Cont'd)

Parker's Cut

- Lower Colorado River Authority /Matagorda Bay Foundation Study 2000

Southwest Cut

TxDOT/TPWD Joint Study 1995-1996

Monitoring Completed Coastal Projects Program

- Nominated in 1984
- Monitoring by CERC 1990 –1994

Previous Studies (Cont'd)

Mouth of Colorado Entrance Channel

- Coastal and Hydraulics Lab study to investigate the coastal and inlet physical processes and the causes of excessive sediment shoaling of the east jetty, weir, and impoundment basin.

Ongoing Activities

- Comprehensive Study

WES numerical model study of hydrodynamics including currents, salinity, and sediment changes associated with opening Parker's Cut, a southwest cut, a small opening in the diversion dam, or some combination of openings. Study was initiated in spring of 2001 and the draft final report is scheduled for completion in December 2002.

- Southwest point corner stabilization